

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Rubicon LLC  
Reduction Plant  
Geismar, Ascension Parish, Louisiana  
Agency Interest Number: 1468  
Activity Number: PER20070020  
Proposed Permit Number: 2278-V1**

**I. APPLICANT**

**Company:**  
Rubicon LLC  
PO Box 517  
Geismar, Louisiana 70734-0517

**Facility:**  
Reduction Plant  
9156 Hwy 75  
Geismar, Ascension Parish, Louisiana  
UTM coordinates: 15 Horizontal, 691.657 km E, 3342.685 km N

**II. FACILITY AND CURRENT PERMIT STATUS**

Rubicon LLC, Reduction Plant, an existing chemical manufacturing facility began operation in 1966. The Reduction Plant currently operates under Permit No. 2278-V0, issued October 28, 2002.

Rubicon LLC - Geismar Plant is a designated Part 70 source. Several Part 70 permits have been issued to the operating units within the complex. These include:

Permit No.	Unit or Source	Date Issued
2391-V8	MDI Plant	06/22/2007
2329-V3	TDI Plant	12/21/2005
2261-V2	Aniline Complex	09/26/2005
2010-V0	Polyols Plant	12/28/2004
2420-V1	Offsites Area	12/21/2007
2278-V0	Reduction Plant	10/28/2002
3037-V1	Maleic Anhydride Plant	08/13/2008

**Rubicon LLC**  
**Reduction Plant**  
**Geismar, Ascension Parish, Louisiana**  
**Agency Interest Number: 1468**

### **III. PROPOSED PROJECT/PERMIT INFORMATION**

#### **Application**

A permit application and Emission Inventory Questionnaire were submitted by Rubicon LLC on April 24, 2007, as well as additional information dated November 14, 2007, requesting a Part 70 operating permit renewal/modification.

#### **Project**

The proposed modifications are as follows:

1. Increase emissions due to alternative operating scenarios for Emission Point EA and General Condition XVII Number 2 (reactor purging/start-up/shutdown emissions). General Condition XVII Number 2 is being incorporated into Emission Point EA and will be deleted;
2. Increase throughputs for Emission Point EB and other storage vessels under Emission Points EF and EG;
3. Increase the operating temperature on Condenser TT-414, Emission Point EM, to allow for operational flexibility;
4. Document the shutdown of the TDA Process Unit for verification of creditable VOC emission reductions and delete TDA Emission Points AM, AQ, CC, CD, CE, CG, CH, CI, CJ, CK, CM, and C1 from the permit;
5. Revise calculations for Emission Point GV and GW, and General Condition XVII Number 6 to eliminate the emissions associated with the TDA Process Unit;
6. Revise Emission Point C2 to eliminate the TDA Process Unit emissions, address modifications to the trench system and to modify the waste water components;
7. Revise calculations using EPA's TANKS 4.0 Program for Emission Points EB, EC, ED, EF, EG, EH, EI, EJ, EN, GD, GV, GW and GX, (calculational change only);
8. Revise emissions using latest AP-42 loading calculations for Emission Points CW, E1, GN, and GO (calculational change only);
9. Update Insignificant Activities including the proposed redesignation of Emission Points CA, CL, CW, ED, EH, EI, EJ, EN, GB, GD, GG, GN, GO, GX, GY, GZ, reactor residue loading and emergency generator operation as Insignificant Activities and the elimination of these point sources from the permit. Currently all reactor residue loading is under Point Source QM at the Aniline Complex, Part 70 Operating Permit Number 2261-V2;
10. Revise fugitive emissions for Emission Points EL and GP (calculational change only);
11. Revise emissions for Emission Points GA and GE to reflect 2005 BIF Recertification Testing results, and the use of the current AIRS Facility Subsystem SCC and emission factors for SO<sub>2</sub> emissions (calculational change only);
12. Update State Only Specific Conditions for the BIF units to reflect the new maximum hazardous waste feed limits established during the 2005 Recertification and a minor wording change;
13. VOC speciation of the hydrocarbons for Emission Points GA and GE;
14. Update Regulatory Applicability, including New Source Performance Standard

**Rubicon LLC**  
**Reduction Plant**  
**Geismar, Ascension Parish, Louisiana**  
**Agency Interest Number: 1468**

- (NSPS) Subpart Kb with the 10/03 regulation amendment;
15. Speciation of alpha-picoline (2-methylpyridine) out of VOCs (non SARA/non air toxic) category;
  16. Update the General Condition XVII emissions;
  17. Reinitiate the project to move the three way valve for Emission Point GV;
  18. Revise the particulate matter emissions for the Reductions Cooling Tower, Emission Point AS; and
  19. Incorporate an administrative amendment request submitted to the LDEQ in September 2006 that addresses errors in permit pages for deleted Emission Point GJ and the current Emission Point EM;
  20. Incorporate the Authorization to Construct issued July 19, 2007. This emission reduction project routed the DPA 2 Vacuum Vent Header to the DPA 1 Superheater; and
  21. Incorporate the Addendum to the April 2007 Part 70 Permit Renewal Application incorporating the June 2005 Minor Permit Modification (dated 11/07).

**Proposed Permit**

Permit 2278-V1 will be the renewal/modification of Part 70 operating permit for the Reduction Plant.

**Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM <sub>10</sub>	12.47	13.07	+ 0.60
SO <sub>2</sub>	4.55	0.05	- 4.50
NO <sub>x</sub>	151.23	144.25	- 6.98
CO	17.55	13.41	- 4.14
VOC	160.68	34.15	- 126.53

**IV. REGULATORY ANALYSIS**

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

**Rubicon LLC**  
**Reduction Plant**  
**Geismar, Ascension Parish, Louisiana**  
**Agency Interest Number: 1468**

**Applicability and Exemptions of Selected Subject Items**

ID No.	Requirement	Note
N/A	-	-

**Prevention of Significant Deterioration/Nonattainment Review**

The Reduction Plant is an existing facility. There is no physical change or change in the method of operation per LAC 33:III.509.B.c.iv. - Major Modification. Therefore, the PSD analysis is not required.

**Streamlined Equipment Leak Monitoring Program**

It is required that the Reduction Plant comply with a streamlined equipment leak monitoring program. Compliance with the streamlined program shall serve to comply with each of the fugitive emission monitoring programs being streamlined.

For the Reduction Plant, fugitive emissions are subject to the requirements of 40 CFR 63 Subpart H, and LAC 33:III.2122. Among these regulations, 40 CFR 63 Subpart H is the overall most stringent program. Therefore, fugitive emissions shall be monitored as required by this program (40 CFR 63 Subpart H).

Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
Diphenylamine Production	LAC 33:III.2122	10% VOC	NESHAP (HON) 40 CFR 63.160 Subpart H
Aniline Production	NESHAP (HON) 40 CFR 63 Subpart H	5% VOHAP/VOTAP	

**MACT Requirements**

The Reduction Plant is part of Rubicon Facility, a major source of toxic air pollutants. Air Toxics Compliance Plan No. 92059 dated January 8, 1996, was approved for the Rubicon Facility.

**Air Quality Analysis**

Impact on air quality from the emissions of the proposed unit will be below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond industrial property.

**Rubicon LLC**  
**Reduction Plant**  
**Geismar, Ascension Parish, Louisiana**  
**Agency Interest Number: 1468**

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

**V. PERMIT SHIELD**

Not Applicable

**VI. PERIODIC MONITORING**

N/A

**VII. GLOSSARY**

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H<sub>2</sub>S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO<sub>x</sub>) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

**Rubicon LLC**  
**Reduction Plant**  
**Geismar, Ascension Parish, Louisiana**  
**Agency Interest Number: 1468**

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM<sub>10</sub> – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulfur.

Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.